

AMMONIA, SULFATE, CHLORIDE, Cr+6 - SOILS

Version 2, April 2003

OLIN-WILMINGTON
LEVEL I DATA QUALITY EVALUATION

Reviewer/Date BRADLEY B. LAFOREST
Sr.

Review/Date 3/4/10

STANDARD OPERATING PROCEDURE AND CHECKLIST
WET CHEMISTRY PARAMETERS BY VARIOUS METHODS

Lab Report # VARIOUS - SEE BELOW
Project # 6107100016-12

J24173, J24194, J24223, J24244, J24251, J24309, J24327, J24343, J24365, J24417, J24444, J24454, J24477, J24563, J24582, J24634, J24665, J24686

Note: The following analyses will be evaluated according to the "MADEP QA/QC Guidelines for Sampling, Data Evaluation and Reporting Activities." MADEP, however, may not list QA/QC criteria for every chemical analysis. Where not defined by MADEP, criteria will default to values stipulated in the QAPP. Where the QAPP does not define criteria, QA/QC requirements will default to limits employed by the laboratory.

1.0 Laboratory Deliverable Requirements

1.1 **Laboratory Information:** Was all of the following provided in the laboratory report? Yes No N/A Comments:
Check items received.

- Name of Laboratory
- Address
- Project ID
- Phone #
- Sample identification - Field and Laboratory
- Client Information: Name
- Address
- Client Contact
- (IDs must be cross-referenced)

ACTION: If no, contact lab for submission of missing or illegible information.

1.2 **Laboratory Report Certification Statement**

Yes No N/A Comments:

Does the laboratory report include a completed Analytical Report Certification in the required format?

ACTION: If no, contact lab for submission of missing certification or certification with correct format.

1.3 **Laboratory Case Narrative:**

Yes No N/A Comments:

- Narrative serves as an exception report for the project and method QA/QC performance.
- Narrative includes an explanation of each discrepancy on the Certification Statement.

ACTION: If no, contact lab for submission of missing or illegible information.

1.4 **Chain of Custody (COC) copy present with all documentation completed?**

Yes No N/A Comments:

Does the laboratory report include copies of Chain of Custody forms containing all samples in this SDG?

NOTE: Olin receives and maintains the *original* COC.

ACTION: If no, contact lab for submission of copy of missing completed COC.

1.5 **Sample Receipt Information (Cooler Receipt Form):** Were each of the following tasks completed and recorded upon receipt of the sample(s) into the laboratory?

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Yes No N/A Comments:

Sample temperature confirmed: must be 1° – 10° C. (If samples were sent by courier and delivered on the same day as collection, temperature requirement does not apply).

Container type noted Condition observed pH verified (where applicable) Field and lab IDs cross referenced

ACTION: If no, contact lab for submission of missing or incomplete documentation.

1.5.1 Were the correct bottles and preservatives used?

Yes No N/A Comments:

Ammonia, – 1 Liter polyethylene/H₂SO₄ to pH<2, cool to 4°C

Alkalinity – 1 500mL polyethylene/cool to 4°C

Chemical Oxygen Demand – 250 mL polyethylene/H₂SO₄ to pH<2, cool to 4°C

Chloride, pH, sulfate - 1 500mL polyethylene/cool to 4°C

Organic Carbon – 500 mL amber glass bottle/HCl or H₂SO₄ to pH<2, cool to 4°C

Sulfide – 50 mL polyethylene/ZnAcetate + NaOH to pH>9, cool to 4°C

Specific conductance, TDS, TSS – 100 mL polyethylene/cool to 4°C

TSS, TDS - 1 500mL polyethylene/cool to 4°C

ACTION: If no, inform senior chemist. Document justification for change in container/volume (if applicable), qualify positive and non-detect data (J) data if cooler temperature exceeds 10°C. Rejection of data requires professional judgment

1.5.2 Were all samples delivered to the laboratory without breakage?

Yes No N/A Comments:

1.5.3 Does the *Cooler Receipt Form* or Lab Narrative indicate other problems with sample receipt, condition of the samples, analytical problems or special circumstances affecting the quality of the data?

Yes No N/A Comments:

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1.6 Sample Results Section: Was the following information supplied in the laboratory report for each sample?

Yes No N/A Comments:

- | | | | | | |
|---|--|--|--|--|--|
| <input checked="" type="checkbox"/> Field ID and Lab ID | <input checked="" type="checkbox"/> Date and time collected | <input checked="" type="checkbox"/> Analyst Initials | <input checked="" type="checkbox"/> Dilution Factor | <input checked="" type="checkbox"/> % moisture or solids | <input checked="" type="checkbox"/> Reporting limits |
| <input checked="" type="checkbox"/> Clean-up method | <input checked="" type="checkbox"/> Analysis method | <input checked="" type="checkbox"/> Preparation method | <input checked="" type="checkbox"/> Date of preparation/extraction/digestion clean-up and analysis, where applicable | | |
| <input checked="" type="checkbox"/> Matrix | <input checked="" type="checkbox"/> Target analytes and concentrations | | <input checked="" type="checkbox"/> Units (soils must be reported in dry weight) | | |

ACTION: If no, contact lab for submission of missing or incomplete information.

1.7 QA/QC Information: Was the following information provided in the laboratory report for each sample batch?

Yes No N/A Comments:

- Method blank results LCS recoveries MS/MSD recoveries and RPDs Laboratory duplicate results (where applicable)

ACTION: If no, contact lab for submission of missing or incomplete information.

2.0 Holding Times

Yes No N/A Comments:

Have any technical holding times, determined from date of collection to date of analysis, been exceeded? The holding times are as follows:

28 days = ammonia, chemical oxygen demand, chloride, organic carbon, specific conductance, total organic carbon and sulfate
 Alkalinity = 14 days Sulfide, TDS, TSS = 7 days pH = analyze immediately Nitrate nitrogen as N = 48 hrs
 Nitrite nitrogen as N = 48 hrs *Cp+6 = 30 DAYS TO DIGESTION, 7 TO ANALYSIS*

CR#-SAMPLE OC-SB-470-31/33-XXX EXCEEDED PREPARATION HOLD BY 24 DAYS - J DETECTED

NOTE: List samples that exceed hold time with # of days exceeded on checklist

ACTION: If technical holding times are exceeded qualify results (J). For water samples that are grossly exceeded (>2X hold time) reject (R) all non-detect results. Professional judgment used to qualify soils.

3.0 Laboratory Method

Yes No N/A Comments:

3.1 Was the correct laboratory method used?

ACTION: If no, contact lab to provide justification for method change compared to the requested method. Contact senior chemist to inform Client of change or to request variance.

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3.2 Are the practical quantitation limits the same as those specified by the
 SOW QAPP Lab?

Yes No N/A

Comments:

Note: The MADEP QA/QC Guidelines do not yet list PQLs for wet chemistry analyses, therefore all criteria will default to values stipulated in the QAPP*. Where the QAPP does not define criteria, QA/QC requirements default to limits employed by the lab**. Other criteria may also apply.

QAPP
 Cr+6 = 2 mg/kg
 NH₃ = 5 mg/kg
 SULFATE = 40 mg/kg
 CHLORIDE = 20 mg/kg

Ammonia* = 0.1 mg/L

Alkalinity** = 1 mg/L

Bicarbonate Alkalinity** = 1 mg/L

Carbonate Alkalinity** = 1 mg/L

Nitrate Nitrogen as N* = .05 mg/L

Nitrite Nitrogen as N* = .01 mg/L

Chloride* = 1 mg/L

Hardness * = 2.64 mg/L

Spec. Cond.** 3 umhos/cm

Total Organic Carbon** = 1 mg/L

Sulfate (EPA 300.0)* = 2 mg/L

COD:* Low - 20 mg/L

pH* < 2 to > 12

TDS* = 10 mg/L

TSS* = 5 mg/L

Other parameter(list) _____ PQL = _____ Source of PQL = _____

Other parameter(list) _____ PQL = _____ Source of PQL = _____

ACTION: If no, evaluate change with respect to sample matrix, preparation, dilution, moisture, etc. If sample PQL is indeterminate, contact lab for explanation.

3.3 Are the appropriate parameter results present for each sample in the SDG?

Yes No N/A

Comments:

ACTION: If no, check Request for Analysis to verify if method was ordered and COC to verify that it was sent, and contact lab for resubmission of the missing data

3.4 If dilutions were required, were dilution factors reported?

Yes No N/A

Comments:

ACTION: If no, contact the lab for submission.

4.0 Method Blanks

Yes No N/A

Comments:

4.1 Are the Method Blank Summaries present?

ACTION: If no, call the laboratory for submission of missing data.

4.2 Was a method blank analyzed for each analysis batch of wet chemistry field samples of 20 or less?

Yes No N/A

Comments:

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ACTION: If no, document discrepancy in case narrative and contact lab for justification. Consult senior chemist for action needed.

4.3 Is the method blank less than the PQL? (See Section 3.2 for PQLs).

Yes No N/A Comments:

4.4 Do any method blanks have positive results for wet chemistry parameters? Qualify data according to the following:

Yes No N/A Comments:

If the sample concentration is $< 5 \times$ blank value, flag sample result non-detect "U" at the PQL or the concentration reported if greater than the PQL.

If the sample concentration is $> 5 \times$ blank value, no qualification is needed.

ACTION: If any blank has positive results, list all the concentrations detected and flagging level (flagging level = $5 \times$ blank value) on the checklist. List all affected samples and their qualifiers.

5.0 Laboratory Control Standards

5.1 Was a laboratory control standard (LCS) run with each analytical batch of 20 samples or less?

Yes No N/A Comments:

ACTION: If no, call laboratory for LCS form submittal. If data is not available, use professional judgment to determine qualification actions for data associated with the batch.

5.2 Is a LCS Summary Form present?

Yes No N/A Comments:

ACTION: If no, contact lab for resubmission of missing data.

5.3 Is any wet chemistry analyte LCS recovery outside the control limits?

Yes No N/A Comments:

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LCS Limits:

LAD QL Limits circled

Alkalinity** <input type="checkbox"/> = 80-120%	Bicarbonate Alkalinity** <input type="checkbox"/> = 80-120%	Carbonate Alkalinity** <input type="checkbox"/> = 80-120%	Specific Conductivity * <input type="checkbox"/> = 80-120%
Total Organic Carbon** <input type="checkbox"/> = 80-120%	TDS** <input type="checkbox"/> = 80-120%		Ammonia Nitrogen as N* <input type="checkbox"/> = 80-120%
COD Low* <input type="checkbox"/> = 80-120%	Nitrate Nitrogen as N** <input type="checkbox"/> = 80-120%%	Nitrite Nitrogen as N** <input type="checkbox"/> = 80-120%	85-115
Hardness* <input type="checkbox"/> = 80-120%	Chloride* <input checked="" type="checkbox"/> = 80-120%	Sulfate (EPA 300.0)* <input checked="" type="checkbox"/> = 80-120%	pH* <input type="checkbox"/> = 80-120% TSS* NA
✓ <i>C_F</i> 85-115%	85-115	85-115	
Other parameter(list) _____ %R = _____		<input type="checkbox"/> Rec Limits = _____	
Other parameter(list) _____ %R = _____		<input type="checkbox"/> Rec Limits = _____	

(MADEP has not yet defined LCS recovery limits for wet chemistry analyses.)

ACTION: If recovery is above the upper limit, qualify all positive sample results within the batch as (J). If recovery is below the lower limit, qualify all positive and no-detect results within the batch as (J). If LCS recovery is <10%, non-detect results are rejected (R).

6.0 Matrix Spikes

LAD SPIKED EB - NO QUALS NECESSARY

Matrix spikes may be collected at different frequencies based on monthly, quarterly, or task specific schedules. Confirm spike requirements for each set with the senior chemist.

6.1 Were project-specific MS/MSDs analyzed? List project samples that were spiked.

SEE ATTACHED Summary

Yes No N/A Comments:

ACTION: If no, contact senior chemist to see if any were specified.

6.2 Is the MS/MSD Recovery Form present?

Yes No N/A Comments:

ACTION: If no, contact lab for resubmission of missing data.

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6.3 Were matrix spikes analyzed at the required frequency of 1 per 20 samples per matrix? Yes No N/A Comments:

ACTION: If any matrix spike data is missing, call lab for resubmission.

6.4 Are any wet chemistry analyte spike recoveries outside of the QC limits? Yes No N/A Comments:

SEE ATTACHED SUMMARY FOR AMMONIA + CHLORIDE % REC OUTSIDE QC LIMITS

NOTE: $\%R = \frac{(SSR-SR)}{SA} \times 100\%$ Where: SSR = Spiked sample result
SA = Spike added SR = Sample result

MS/MSD Recovery Limits:

Alkalinity* = NA Bicarbonate Alkalinity* = NA Carbonate alkalinity* = NA Ammonia* (LACHAT) = 74-125%
 Chloride** = 75-125% Specific Conductivity* = NA Total Organic Carbon* = NA TDS** = NA
 COD Low* = 75-125% Nitrate Nitrogen as N** = 75-125%
 Nitrite Nitrogen as N** = 75-125% Hardness* = 75-125% Sulfate (EPA 300.0)* = 75-125% pH* = NA TSS* = NA
 Other parameter(list) Cr⁶⁺ 75-125% % R = _____ Rec Limits = _____

* = Laboratory Limits **** = Olin QAPP Limits** (MADEP has not yet defined LCS recovery limits for wet chemistry analyses.)

NOTES: 1) If only one of the recoveries for an MS/MSD pair is outside of the control limits, no qualification is necessary. Use professional judgment for the MS/MSD flags.
 2) If the MS/MSD was performed by the laboratory on a non-project sample, no qualification is required.

ACTION: MS/MSD flags only apply to the sample spiked. Do not evaluate if sample concentration is > 4X spike. If the recoveries of the MS and MSD exceed the upper control limit, qualify positive results as estimated (J). If the recoveries of the MS and MSD are lower than the lower control limit but > 30%, qualify both positive results and non-detects (J). If the MS/MSD recovery is < 30% and the sample is non-detect, the results are considered unusable and flagged (R).

ACTION: Laboratory control limits apply when spiked sample results fall within the normal calibration range. If dilutions are required due to high sample concentrations, the data is evaluated, but no flags are applied.

6.5 Are any RPDs for MS/MSD recoveries outside of the QA/QC limits? Yes No N/A Comments:

NOTE: $RPD = \frac{S - D}{(S + D)/2} \times 100\%$ Where S = MS result
D = MSD result

SEE ATTACHED SUMMARY

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MS/MSD RPD Limits:

Soils *anal 3/5/10*

Alkalinity* = NA	Bicarbonate Alkalinity* = NA	Carbonate alkalinity* = NA	Ammonia** (LACHAT) <input checked="" type="checkbox"/> = 20% <i>35%</i>
Chloride**(SM 4500 Cl) <input checked="" type="checkbox"/> = 20% <i>35%</i>	Specific Conductivity * = NA	Total Organic Carbon* = NA	TDS** = NA Total Organic Carbon* = NA
COD Low** <input type="checkbox"/> = 20%	COD High** <input type="checkbox"/> = 20%	Nitrate Nitrogen as N** <input type="checkbox"/> = 20%	Nitrite Nitrogen as N** <input type="checkbox"/> = 20%
Hardness* = NA	Sulfate (EPA 300.0)* <input checked="" type="checkbox"/> = 20% <i>35%</i>	pH* = NA	TSS* = NA
Other parameter(list) <u>Cr + V 20 35%</u>	RPD = _____	<input type="checkbox"/> RPD limit = _____	
Other parameter(list) _____	RPD = _____	<input type="checkbox"/> RPD limit = _____	

* = Laboratory Limits

** = Olin QAPP Limits

(MADEP has not yet defined LCS recovery limits for wet chemistry analyses.)

7.0 Laboratory Duplicate

Are the RPDs for the laboratory duplicates *anal 3/5/10* < 20%? *35%*

Yes No N/A Comments:

ACTION: If the RPD is greater than specified limits, qualify all results for that analyte as estimated (J).

8.0 Sampling Accuracy

The majority of ground water samples are collected directly from a tap, process stream, or with dedicated tubing. Rinse blanks will not be collected.

8.1 Were rinsate blanks collected? Prior to evaluating rinsate blanks, obtain a list of the associated samples from the senior chemist.

Yes No N/A Comments:

8.2 Do any rinsate blanks have positive results?

Yes No N/A Comments:

SEE ATTACHED SUMMARY FORMS

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ACTION: Evaluate rinsate results vs. blank results to determine if contaminant may be laboratory-derived. If not lab-related, qualify according to the table below.

If the sample concentration is $< 5 \times$ blank value, flag sample result non-detect "U" at the PQL or the concentration reported if greater than the PQL.

If the sample concentration is $> 5 \times$ blank value, no qualification is needed.

NOTE: MADEP does not require the collection of rinsate blanks.

9.0 Field Duplicates

9.1 Were field duplicate samples collected? Obtain a list of samples and their associated field duplicates.

Yes No N/A Comments:

9.2 Were field duplicates collected per the required frequency?

Yes No N/A Comments:

SOW QAPP MADEP Option 1 (1 per 20) MADEP Option 3 (1 per 10)

9.3 Was the RPD $\leq 50\%$ for soils or $\leq 30\%$ for waters? Calculate the RPD for all results and attach to this review.

Yes No N/A Comments:

ACTION: RPD must be $\leq 50\%$ for soil or $\leq 30\%$ water. Qualify data (J) for both sample results if the RPD exceeds limit.

SEE ATTACHED NH₃ IN SAMPLE OC-5B-456-7.0/9.0-XXX = ND
OC-5B-456-7.0/9.0-OXP = 68 mg/kg (> 2xRL)

J NH₃ RESULTS IN 360-24563 FOR SAMPLES COLLECTED ON 9/11/09

Was any of the data qualified?

Yes No N/A Comments:

If so, apply data qualifiers directly to the DQE copy of laboratory report and **flag pages** for entry in database.

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REFERENCES

MACTEC, Quality Assurance Project Plan for Remedial Investigation/Feasibility Study – Olin Chemical Superfund Site, Wilmington Property, 51 Eames Street, Wilmington, MA”, MACTEC Engineering and Consulting. Draft .October 2008.

STL-Westfield, 2002. “Olin – General Chemistry Control Limits (Soil & Water),” Severn Trent Laboratories, Inc., 53 Southampton Road, Westfield, MA, 01085.

Quality Control Results

Client: Olin Corporation

Job Number: 360-24223-1
Sdg Number: OCRI-03

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 360-48445**

**Method: 300.0
Preparation: N/A**

MS Lab Sample ID: 360-24223-1 Analysis Batch: 360-48445
Client Matrix: Solid Prep Batch: N/A
Dilution: 1.0
Date Analyzed: 08/31/2009 1657
Date Prepared: N/A
Date Leached: 08/28/2009 1500 Leachate Batch: 360-48337

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 10 mL

MSD Lab Sample ID: 360-24223-1 Analysis Batch: 360-48445
Client Matrix: Solid Prep Batch: N/A
Dilution: 1.0
Date Analyzed: 08/31/2009 1712
Date Prepared: N/A
Date Leached: 08/28/2009 1500 Leachate Batch: 360-48337

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Sulfate-Soluble	119	118	75 - 125	1	20		
Chloride-Soluble	131	131	75 - 125	0	20	F	F

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Olin Corporation

Job Number: 360-24417-1
Sdg Number: OCRI-10

Method Blank - Batch: 360-48986

Method: L107-06-1B
Preparation: Distill/Ammonia

Lab Sample ID: MB 360-48986/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 09/16/2009 1330
Date Prepared: 09/15/2009 1130

Analysis Batch: 360-49040
Prep Batch: 360-48986
Units: mg/Kg

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Ammonia	ND		0.10	0.10

Lab Control Sample - Batch: 360-48986

Method: L107-06-1B
Preparation: Distill/Ammonia

Lab Sample ID: LCS 360-48986/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 09/16/2009 1331
Date Prepared: 09/15/2009 1130

Analysis Batch: 360-49040
Prep Batch: 360-48986
Units: mg/Kg

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Ammonia	10.0	9.87	99	85 - 115	

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 360-48986**

Method: L107-06-1B
Preparation: Distill/Ammonia

MS Lab Sample ID: 360-24417-10
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 09/16/2009 1344
Date Prepared: 09/15/2009 1130

Analysis Batch: 360-49040
Prep Batch: 360-48986

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 0.74 g
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 360-24417-10
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 09/16/2009 1345
Date Prepared: 09/15/2009 1130

Analysis Batch: 360-49040
Prep Batch: 360-48986

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 0.87 g
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Ammonia	16	20	75 - 125	6	20	F	F

Calculations are performed before rounding to avoid round-off errors in calculated results.

	Date	NH3			Sulfate		Chloride		Cr+6		
		RESULT	RPD		RESULT	RPD	Chloride	RPD	Cr+6	RPD	
24223-9, 10	8/19/2009	18	9.6	37	ND	ND	ND	ND			
24251-4, 3	8/24/2009	ND	ND		ND	ND	ND	ND			
24251-19, 18	8/25/2009	ND	ND		ND	ND	ND	ND			
24309-23, 22	8/25/2009	19	12	28	ND	ND	ND	ND			
24327-12, 11	8/27/2009	16	16	0	ND	ND	ND	ND			
24343-10, 9	8/28/2009	23	24	-3	ND	ND	ND	ND			
24343-17, 16	8/28/2009	700	630	7	ND	ND	ND	ND			
24365-4, 3	8/31/2009	ND	ND		ND	ND	ND	ND			
24417-10, 9	9/2/2009	75	78	-3	ND	ND	ND	ND			
24444-2, 1	9/3/2009	18	21	-11	ND	ND	ND	ND			
24444-9, 8	9/2/2009	ND	ND		39	39	0	ND	ND		
24444-15, 14	9/3/2009								ND	ND	
24563-5, 4	9/10/2009	8.6	14	-35	ND	ND	ND	ND			
24563-14, 13	9/11/2009	ND	68		ND	ND	ND	ND			
24563-20, 19	9/11/2009								3.9	6.3	-34
24582-23, 22	9/15/2009	41	51	-15	ND	ND	ND	ND			
24582-25, 24	9/15/2009								7.3	6.4	9

Ammonia	MS (75-125%)	MSD (75%-125%)	RPD (35%)
24173-17	79	97	33
24223-9	99	99	18
23223-15	88	97	7
24251-4	102	102	4
24251-19	95	101	13
24309-19	103	101	1
24309-23	100	96	10
24327-12	94	91	4
24343-10	96	90	12
24343-17	89	86	4
24365-4	95	98	5
24417-10	16	20	6
24444-2	79	94	24
24444-9	96	97	1
24454-9	85	91	12
24499-22	90	101	1
24563-5	97	96	16
24563-14	93	77	21
24582-22	98	110	10
24665-1	91	95	6
24665-2	88	94	12
24686-7	100	104	3
24686-16	99	101	4

Sulfate	MS (75-125%)	MSD (75%-125%)	RPD (35%)
24223-1	119	118	1
24223-9	119	119	0
24251-4	114	113	1
24251-19	111	112	1
24309-1	117	117	0
24309-23	117	118	1
24327-12	115	115	0
24343-10	105	105	0
24343-17	117	117	0
24365-4	114	115	1
24417-10	104	103	1
24444-2	112	111	1
24444-9	110	109	0
24499-14	109	109	0
24563-5	110	110	1
24563-14	124	123	0
24582-22	104	105	0
24634-1	108	108	1
24665-3	109	111	2
24665-18	115	114	1
24686-1	114	114	0

Chloride	MS (75-125%)	MSD (75%-125%)	RPD (35%)
24223-1	131	131	0
24223-9	116	116	1
24251-4	112	112	0
24251-19	109	110	1
24309-1	108	107	1
24309-23	111	111	0
24327-12	114	114	1
24343-10	103	103	0
24343-17	104	104	0
24365-4	113	113	0
24417-10	112	112	0
24444-2	112	110	2
24444-9	106	106	0
24499-14	107	108	0
24563-5	111	111	0
24563-14	113	112	0
24582-22	106	106	0
24634-1	108	107	1
24665-3	112	109	2
24665-18	112	112	0
24686-1	108	109	0

Cr+6	MS(75%-125%)
24343-19	99
24343-19(insol)	105
24343-20	93
24343-20(insol)	94
24444-15	97
24444-15(insol)	104
24454-14	95
24454-14(insol)	103
24563-20	100
24563-20(insol)	101
24582-25	90
24582-25(insol)	98

		Date	NH3	Sulfate	Chloride	Cr+6
24173-8	OC-EBK-001	8/18/2009	ND	ND	ND	
24244-14	OC-EBK-003	8/21/2009		0.90 ND	ND	
24251-26	OC-EBK-004	8/24/2009	ND		21 ND	
24327-19	OC-EBK-005	8/27/2009	ND	ND	ND	
24365-12	OC-EBK-006	8/31/2009	ND	ND	ND	ND
24444-16	OC-EBK-007	9/3/2009	ND	ND	ND	
24454-18	OC-EBK-008	9/8/2009	ND	ND	ND	ND
24563-23	OC-EBK-009	9/10/2009	ND	ND	ND	
24582-4	OC-EBK-010	9/14/2009	ND	ND	ND	
24634-18	OC-EBK-011	9/16/2009	ND	ND	ND	
24686-20	OC-EBK-012	9/17/2009	ND	ND	ND	

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Job Number: 360-24223-1
 Sdg Number: OCRI-03

Client Sample ID: OC-SB-419-0.0/1.0-XXX
 Lab Sample ID: 360-24223-4

Date Sampled: 08/19/2009 1555
 Date Received: 08/20/2009 1800
 Client Matrix: Solid
 Percent Solids: 97

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0					
Sulfate	43	mg/Kg	41	41	1.0
Chloride	30 J	mg/Kg	21	21	1.0
Method: L107-06-1B					
Prep Method: Distill/Ammonia					
Ammonia	ND	mg/Kg	6.1	6.1	1.0
Method: Moisture					
Percent Moisture	2.6	%	1.0	1.0	1.0

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Job Number: 360-24244-1
 Sdg Number: OCRI-04

Client Sample ID: OC-SB-432-0.0/1.0-XXX
 Lab Sample ID: 360-24244-1

Date Sampled: 08/20/2009 1435
 Date Received: 08/21/2009 1725
 Client Matrix: Solid
 Percent Solids: 93

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: MAVPH			Date Analyzed: 08/27/2009 0104		
Prep Method: 5035			Date Prepared: 08/26/2009 1447		
C5-C8 Aliphatics (unadjusted)	ND	mg/Kg	3.2	3.2	1.0
C5-C8 Aliphatics (adjusted)	ND	mg/Kg	3.2	3.2	1.0
C9-C10 Aromatics	3.4	mg/Kg	3.2	3.2	1.0
C9-C12 Aliphatics (unadjusted)	ND	mg/Kg	3.2	3.2	1.0
C9-C12 Aliphatics (adjusted)	ND	mg/Kg	3.2	3.2	1.0
Total VPH	3.4	mg/Kg	3.2	3.2	1.0
Surrogate				Acceptance Limits	
2,5-Dibromotoluene (fid)	43	X	%	70 - 130	
2,5-Dibromotoluene (pid)	45	X	%	70 - 130	
Method: MA-EPH			Date Analyzed: 08/25/2009 1346		
Prep Method: 3546			Date Prepared: 08/24/2009 1233		
C11-C22 Aromatics (unadjusted)	1900	mg/Kg	35	35	10
C11-C22 Aromatics (Adjusted)	1900	mg/Kg	35	35	10
C19-C36 Aliphatics	77	mg/Kg	35	35	10
C9-C18 Aliphatics	ND	mg/Kg	35	35	10
Total EPH	2000	mg/Kg	35	35	10
Surrogate				Acceptance Limits	
o-Terphenyl	39	X	%	40 - 140	
2-Fluorobiphenyl	78		%	40 - 140	
2-Bromonaphthalene	79		%	40 - 140	
1-Chlorooctadecane	48		%	40 - 140	
Method: Soluble-300.0			Date Analyzed: 09/01/2009 2154		
Sulfate	280	mg/Kg	43	43	1.0
Chloride	90	mg/Kg	21	21	1.0
Method: L107-06-1B			Date Analyzed: 09/01/2009 1243		
Prep Method: Distill/Ammonia			Date Prepared: 08/31/2009 1250		
Ammonia	170	EB	mg/Kg	6.4	1.0
Method: Moisture			Date Analyzed: 08/25/2009 1438		
Percent Moisture	6.6	%	1.0	1.0	1.0

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Job Number: 360-24244-1
 Sdg Number: OCRI-04

Client Sample ID: OC-SB-432-14/16-XXX
 Lab Sample ID: 360-24244-2

Date Sampled: 08/20/2009 1515
 Date Received: 08/21/2009 1725
 Client Matrix: Solid
 Percent Solids: 91

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: MAVPH			Date Analyzed:	08/27/2009 0137	
Prep Method: 5035			Date Prepared:	08/26/2009 1447	
C5-C8 Aliphatics (unadjusted)	ND	mg/Kg	23	23	10
C5-C8 Aliphatics (adjusted)	ND	mg/Kg	23	23	10
C9-C10 Aromatics	61	mg/Kg	23	23	10
C9-C12 Aliphatics (unadjusted)	75	mg/Kg	23	23	10
C9-C12 Aliphatics (adjusted)	ND	mg/Kg	23	23	10
Total VPH	61	mg/Kg	23	23	10
Surrogate				Acceptance Limits	
2,5-Dibromotoluene (fid)	51 X	%		70 - 130	
2,5-Dibromotoluene (pid)	55 X	%		70 - 130	
Method: MA-EPH			Date Analyzed:	08/25/2009 1256	
Prep Method: 3546			Date Prepared:	08/24/2009 1233	
C11-C22 Aromatics (unadjusted)	1900	mg/Kg	72	72	20
C11-C22 Aromatics (Adjusted)	1700	mg/Kg	72	72	20
C19-C36 Aliphatics	110	mg/Kg	72	72	20
C9-C18 Aliphatics	ND	mg/Kg	72	72	20
Total EPH	1800	mg/Kg	72	72	20
Surrogate				Acceptance Limits	
o-Terphenyl	0 X D	%		40 - 140	
2-Fluorobiphenyl	78	%		40 - 140	
2-Bromonaphthalene	73	%		40 - 140	
1-Chlorooctadecane	0 D X	%		40 - 140	
Method: Soluble-300.0			Date Analyzed:	09/01/2009 2209	
Sulfate	ND	mg/Kg	43	43	1.0
Chloride	ND	mg/Kg	22	22	1.0
Method: L107-06-1B			Date Analyzed:	09/01/2009 1244	
Prep Method: Distill/Ammonia			Date Prepared:	08/31/2009 1250	
Ammonia	12 EB	mg/Kg	6.8	6.8	1.0
Method: Moisture			Date Analyzed:	08/25/2009 1438	
Percent Moisture	8.7	%	1.0	1.0	1.0

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Job Number: 360-24244-1
 Sdg Number: OCRI-04

Client Sample ID: OC-SB-432-5.0/7.0-XXX
 Lab Sample ID: 360-24244-3

Date Sampled: 08/20/2009 1441
 Date Received: 08/21/2009 1725
 Client Matrix: Solid
 Percent Solids: 88

Analyte	Result/Qualifier	Unit	RL	RL	Dilution	
Method: MAVPH			Date Analyzed:	08/27/2009 0210		
Prep Method: 5035			Date Prepared:	08/26/2009 1447		
C5-C8 Aliphatics (unadjusted)	ND	mg/Kg	28	28	10	
C5-C8 Aliphatics (adjusted)	ND	mg/Kg	28	28	10	
C9-C10 Aromatics	36	mg/Kg	28	28	10	
C9-C12 Aliphatics (unadjusted)	31	mg/Kg	28	28	10	
C9-C12 Aliphatics (adjusted)	ND	mg/Kg	28	28	10	
Total VPH	36	mg/Kg	28	28	10	
Surrogate				Acceptance Limits		
2,5-Dibromotoluene (fid)	54	X	%	70 - 130		
2,5-Dibromotoluene (pid)	58	X	%	70 - 130		
Method: MA-EPH			Date Analyzed:	08/25/2009 1322		
Prep Method: 3546			Date Prepared:	08/24/2009 1233		
C11-C22 Aromatics (unadjusted)	4700	mg/Kg	37	37	10	
C11-C22 Aromatics (Adjusted)	4700	mg/Kg	37	37	10	
C19-C36 Aliphatics	69	mg/Kg	37	37	10	
C9-C18 Aliphatics	40	mg/Kg	37	37	10	
Total EPH	4800	mg/Kg	37	37	10	
Surrogate				Acceptance Limits		
o-Terphenyl	48	%		40 - 140		
2-Fluorobiphenyl	59	%		40 - 140		
2-Bromonaphthalene	64	%		40 - 140		
1-Chlorooctadecane	48	%		40 - 140		
Method: Soluble-300.0			Date Analyzed:	09/01/2009 2225		
Sulfate	ND	mg/Kg	45	45	1.0	
Chloride	ND	mg/Kg	22	22	1.0	
Method: L107-06-1B			Date Analyzed:	09/01/2009 1247		
Prep Method: Distill/Ammonia			Date Prepared:	08/31/2009 1250		
Ammonia	12	EB	mg/Kg	7.8	7.8	1.0
Method: Moisture			Date Analyzed:	08/25/2009 1438		
Percent Moisture	12	%	1.0	1.0	1.0	

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Job Number: 360-24244-1
 Sdg Number: OCRI-04

Client Sample ID: OC-SB-443-0.0/1.0-XXX
 Lab Sample ID: 360-24244-4

Date Sampled: 08/20/2009 1635
 Date Received: 08/21/2009 1725
 Client Matrix: Solid
 Percent Solids: 97

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0					
Sulfate	ND	mg/Kg	41	41	1.0
Chloride	ND	mg/Kg	20	20	1.0
Method: L107-06-1B					
Prep Method: Distill/Ammonia					
Ammonia	9.9 EB	mg/Kg	5.8	5.8	1.0
Method: Moisture					
Percent Moisture	3.4	%	1.0	1.0	1.0

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Job Number: 360-24244-1
 Sdg Number: OCRI-04

Client Sample ID: OC-SB-443-18/20-XXX
 Lab Sample ID: 360-24244-5

Date Sampled: 08/20/2009 1720
 Date Received: 08/21/2009 1725
 Client Matrix: Solid
 Percent Solids: 92

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0				Date Analyzed: 09/01/2009 2255	
Sulfate	190	mg/Kg	43	43	1.0
Chloride	ND	mg/Kg	21	21	1.0
Method: L107-06-1B				Date Analyzed: 09/01/2009 1249	
Prep Method: Distill/Ammonia				Date Prepared: 08/31/2009 1250	
Ammonia	220 EB	mg/Kg	6.1	6.1	1.0
Method: Moisture				Date Analyzed: 08/25/2009 1438	
Percent Moisture	7.9	%	1.0	1.0	1.0

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Job Number: 360-24244-1
 Sdg Number: OCRI-04

Client Sample ID: OC-SB-445-25/27-XXX
 Lab Sample ID: 360-24244-8

Date Sampled: 08/21/2009 1015
 Date Received: 08/21/2009 1725
 Client Matrix: Solid
 Percent Solids: 92

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0				Date Analyzed: 09/01/2009 2340	
Sulfate	140	mg/Kg	43	43	1.0
Chloride	ND	mg/Kg	22	22	1.0
Method: L107-06-1B				Date Analyzed: 09/01/2009 1252	
Prep Method: Distill/Ammonia				Date Prepared: 08/31/2009 1250	
Ammonia	160 EB	mg/Kg	7.5	7.5	1.0
Method: Moisture				Date Analyzed: 08/25/2009 1438	
Percent Moisture	8.5	%	1.0	1.0	1.0

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Job Number: 360-24244-1
 Sdg Number: OCRI-04

Client Sample ID: OC-SB-445-8.0/i0-XXX
 Lab Sample ID: 360-24244-9

Date Sampled: 08/21/2009 0910
 Date Received: 08/21/2009 1725
 Client Matrix: Solid
 Percent Solids: 85

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0					
Sulfate	ND	mg/Kg	47	47	1.0
Chloride	ND	mg/Kg	24	24	1.0
Method: L107-06-1B					
Prep Method: Distill/Ammonia					
Ammonia	46 EB	mg/Kg	7.0	7.0	1.0
Method: Moisture					
Percent Moisture	15	%	1.0	1.0	1.0

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Job Number: 360-24244-1
 Sdg Number: OCRI-04

Client Sample ID: OC-SB-437-0.0/1.0-XXX
 Lab Sample ID: 360-24244-10

Date Sampled: 08/21/2009 1230
 Date Received: 08/21/2009 1725
 Client Matrix: Solid
 Percent Solids: 93

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0					
Sulfate	83	mg/Kg	43	43	1.0
Chloride	ND	mg/Kg	21	21	1.0
Method: L107-06-1B					
Prep Method: Distill/Ammonia					
Ammonia	21 EB	mg/Kg	6.7	6.7	1.0
Method: Moisture					
Percent Moisture	6.8	%	1.0	1.0	1.0

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Job Number: 360-24244-1
 Sdg Number: OCRI-04

Client Sample ID: OC-SB-437-21/23-XXX
 Lab Sample ID: 360-24244-11

Date Sampled: 08/21/2009 1310
 Date Received: 08/21/2009 1725
 Client Matrix: Solid
 Percent Solids: 93

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0					
Sulfate	ND	mg/Kg	42	42	1.0
Chloride	ND	mg/Kg	21	21	1.0
Method: L107-06-1B					
Prep Method: Distill/Ammonia					
Ammonia	160 EB	mg/Kg	6.0	6.0	1.0
Method: Moisture					
Percent Moisture	6.8	%	1.0	1.0	1.0

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Job Number: 360-24244-1
 Sdg Number: OCRI-04

Client Sample ID: OC-SB-437-5.0/7.0-XXX
 Lab Sample ID: 360-24244-12

Date Sampled: 08/21/2009 1240
 Date Received: 08/21/2009 1725
 Client Matrix: Solid
 Percent Solids: 89

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0					
Sulfate	ND	mg/Kg	45	45	1.0
Chloride	ND	mg/Kg	23	23	1.0
Method: L107-06-1B					
Prep Method: Distill/Ammonia					
Ammonia	13 EB	mg/Kg	6.9	6.9	1.0
Method: Moisture					
Percent Moisture	11	%	1.0	1.0	1.0

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Job Number: 360-24251-1
 Sdg Number: OCRI-05

Client Sample ID: OC-SB-440-23/25-XXX
 Lab Sample ID: 360-24251-9

Date Sampled: 08/24/2009 1230
 Date Received: 08/24/2009 1910
 Client Matrix: Solid
 Percent Solids: 91

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: MAVPH			Date Analyzed:	08/27/2009 0348	
Prep Method: 5035			Date Prepared:	08/26/2009 1447	
C5-C8 Aliphatics (unadjusted)	ND	mg/Kg	2.4	2.4	1.0
C5-C8 Aliphatics (adjusted)	ND	mg/Kg	2.4	2.4	1.0
C9-C10 Aromatics	ND	mg/Kg	2.4	2.4	1.0
C9-C12 Aliphatics (unadjusted)	ND	mg/Kg	2.4	2.4	1.0
C9-C12 Aliphatics (adjusted)	ND	mg/Kg	2.4	2.4	1.0
Total VPH	ND	mg/Kg	2.4	2.4	1.0
Surrogate			Acceptance Limits		
2,5-Dibromotoluene (fid)	57 X	%		70 - 130	
2,5-Dibromotoluene (pid)	60 X	%		70 - 130	
Method: MA-EPH			Date Analyzed:	09/01/2009 1724	
Prep Method: 3546			Date Prepared:	08/31/2009 1504	
C11-C22 Aromatics (unadjusted)	ND	mg/Kg	3.6	3.6	1.0
C11-C22 Aromatics (Adjusted)	ND	mg/Kg	3.6	3.6	1.0
C19-C36 Aliphatics	ND	mg/Kg	3.6	3.6	1.0
C9-C18 Aliphatics	ND	mg/Kg	3.6	3.6	1.0
Total EPH	ND	mg/Kg	3.6	3.6	1.0
Surrogate			Acceptance Limits		
o-Terphenyl	79	%		40 - 140	
2-Fluorobiphenyl	90	%		40 - 140	
2-Bromonaphthalene	88	%		40 - 140	
1-Chlorooctadecane	62	%		40 - 140	
Method: Soluble-300.0			Date Analyzed:	09/03/2009 1508	
Sulfate	45 EB	mg/Kg	44	44	1.0
Chloride	ND	mg/Kg	22	22	1.0
Method: L107-06-1B			Date Analyzed:	09/03/2009 1351	
Prep Method: Distill/Ammonia			Date Prepared:	09/02/2009 1425	
Ammonia	170	mg/Kg	5.9	5.9	1.0
Method: Moisture			Date Analyzed:	08/26/2009 1223	
Percent Moisture	8.7	%	1.0	1.0	1.0

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Job Number: 360-24251-1
 Sdg Number: OCRI-05

Client Sample ID: OC-SB-446-0.0/1.0-XXX
 Lab Sample ID: 360-24251-16

Date Sampled: 08/25/2009 0805
 Date Received: 08/25/2009 1800
 Client Matrix: Solid
 Percent Solids: 95

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0			Date Analyzed:	09/03/2009 1639	
Sulfate	120 ES	mg/Kg	42	42	1.0
Chloride	ND	mg/Kg	21	21	1.0
Method: L107-06-1B			Date Analyzed:	09/03/2009 1357	
Prep Method: Distill/Ammonia			Date Prepared:	09/02/2009 1425	
Ammonia	ND	mg/Kg	6.8	6.8	1.0
Method: Moisture			Date Analyzed:	08/26/2009 1223	
Percent Moisture	5.1	%	1.0	1.0	1.0

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Job Number: 360-24251-1
 Sdg Number: OCRI-05

Client Sample ID: OC-SB-446-15/17-XXX
 Lab Sample ID: 360-24251-17

Date Sampled: 08/25/2009 0900
 Date Received: 08/25/2009 1800
 Client Matrix: Solid
 Percent Solids: 91

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0				Date Analyzed: 09/03/2009 1654	
Sulfate	59 EB	mg/Kg	43	43	1.0
Chloride	ND	mg/Kg	22	22	1.0
Method: L107-06-1B				Date Analyzed: 09/03/2009 1358	
Prep Method: Distill/Ammonia				Date Prepared: 09/02/2009 1425	
Ammonia	400	mg/Kg	7.0	7.0	1.0
Method: Moisture				Date Analyzed: 08/26/2009 1325	
Percent Moisture	9.4	%	1.0	1.0	1.0

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Job Number: 360-24251-1
 Sdg Number: OCRI-05

Client Sample ID: OC-SB-438-20/22-XXX
 Lab Sample ID: 360-24251-24

Date Sampled: 08/24/2009 1720
 Date Received: 08/25/2009 1800
 Client Matrix: Solid
 Percent Solids: 92

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0				Date Analyzed: 09/03/2009 2011	
Sulfate	96 EO	mg/Kg	42	42	1.0
Chloride	ND	mg/Kg	21	21	1.0
Method: L107-06-1B				Date Analyzed: 09/03/2009 1418	
Prep Method: Distill/Ammonia				Date Prepared: 09/03/2009 1148	
Ammonia	100	mg/Kg	6.7	6.7	1.0
Method: Moisture				Date Analyzed: 08/26/2009 1223	
Percent Moisture	8.2	%	1.0	1.0	1.0

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Job Number: 360-24417-1
 Sdg Number: OCRI-10

Client Sample ID: OC-SB-463-0.0/1.0-XXX
 Lab Sample ID: 360-24417-1

Date Sampled: 09/01/2009 1300
 Date Received: 09/02/2009 1710
 Client Matrix: Solid
 Percent Solids: 96

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0					
Sulfate	54	mg/Kg	42	42	1.0
Chloride	ND	mg/Kg	21	21	1.0
Method: L107-06-1B					
Prep Method: Distill/Ammonia					
Ammonia	11 J	mg/Kg	6.4	6.4	1.0
Method: Moisture					
Percent Moisture	3.8	%	1.0	1.0	1.0

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Job Number: 360-24417-1
 Sdg Number: OCRI-10

Client Sample ID: OC-SB-463-28/30-XXX
 Lab Sample ID: 360-24417-2

Date Sampled: 09/01/2009 1450
 Date Received: 09/02/2009 1710
 Client Matrix: Solid
 Percent Solids: 91

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0					
Sulfate	ND	mg/Kg	43	43	1.0
Chloride	ND	mg/Kg	22	22	1.0
Method: L107-06-1B					
Prep Method: Distill/Ammonia					
Ammonia	510 J	mg/Kg	7.8	7.8	1.0
Method: Moisture					
Percent Moisture	9.2	%	1.0	1.0	1.0

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Job Number: 360-24417-1
 Sdg Number: OCRI-10

Client Sample ID: OC-SB-463-6.0/8.0-XXX
 Lab Sample ID: 360-24417-3

Date Sampled: 09/01/2009 1310
 Date Received: 09/02/2009 1710
 Client Matrix: Solid
 Percent Solids: 84

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0				Date Analyzed: 09/14/2009 1635	
Sulfate	69	mg/Kg	48	48	1.0
Chloride	ND	mg/Kg	24	24	1.0
Method: L107-06-1B				Date Analyzed: 09/15/2009 0935	
Prep Method: Distill/Ammonia				Date Prepared: 09/14/2009 1126	
Ammonia	ND J	mg/Kg	8.3	8.3	1.0
Method: Moisture				Date Analyzed: 09/03/2009 1451	
Percent Moisture	16	%	1.0	1.0	1.0

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Job Number: 360-24417-1
 Sdg Number: OCRI-10

Client Sample ID: OC-SB-464-0.0/1.0-XXX
 Lab Sample ID: 360-24417-4

Date Sampled: 09/01/2009 1550
 Date Received: 09/02/2009 1710
 Client Matrix: Solid
 Percent Solids: 94

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0				Date Analyzed: 09/14/2009 1650	
Sulfate	ND	mg/Kg	42	42	1.0
Chloride	ND	mg/Kg	21	21	1.0
Method: L107-06-1B				Date Analyzed: 09/15/2009 0936	
Prep Method: Distill/Ammonia				Date Prepared: 09/14/2009 1126	
Ammonia	11 J	mg/Kg	7.0	7.0	1.0
Method: Moisture				Date Analyzed: 09/03/2009 1451	
Percent Moisture	5.9	%	1.0	1.0	1.0

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Job Number: 360-24417-1
 Sdg Number: OCRI-10

Client Sample ID: OC-SB-464-26/28-XXX
 Lab Sample ID: 360-24417-5

Date Sampled: 09/01/2009 1650
 Date Received: 09/02/2009 1710
 Client Matrix: Solid
 Percent Solids: 93

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0					
Sulfate	ND	mg/Kg	43	43	1.0
Chloride	31	mg/Kg	22	22	1.0
Method: L107-06-1B					
Prep Method: Distill/Ammonia					
Ammonia	120 J	mg/Kg	6.4	6.4	1.0
Method: Moisture					
Percent Moisture	7.5	%	1.0	1.0	1.0

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Job Number: 360-24417-1
 Sdg Number: OCRI-10

Client Sample ID: OC-SB-464-5.0/7.0-XXX
 Lab Sample ID: 360-24417-6

Date Sampled: 09/01/2009 1650
 Date Received: 09/02/2009 1710
 Client Matrix: Solid
 Percent Solids: 88

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0				Date Analyzed: 09/14/2009 1720	
Sulfate	ND	mg/Kg	45	45	1.0
Chloride	ND	mg/Kg	23	23	1.0
Method: L107-06-1B				Date Analyzed: 09/16/2009 1337	
Prep Method: Distill/Ammonia				Date Prepared: 09/15/2009 1130	
Ammonia	11 J	mg/Kg	7.1	7.1	1.0
Method: Moisture				Date Analyzed: 09/03/2009 1451	
Percent Moisture	12	%	1.0	1.0	1.0

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Job Number: 360-24417-1
 Sdg Number: OCRI-10

Client Sample ID: OC-SB-465-0.0/1.0-XXX
 Lab Sample ID: 360-24417-7

Date Sampled: 09/02/2009 0735
 Date Received: 09/02/2009 1710
 Client Matrix: Solid
 Percent Solids: 95

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0					
Sulfate	ND	mg/Kg	41	41	1.0
Chloride	ND	mg/Kg	21	21	1.0
Method: L107-06-1B					
Prep Method: Distill/Ammonia					
Ammonia	ND J	mg/Kg	6.7	6.7	1.0
Method: Lloyd Kahn					
Total Organic Carbon	1100	mg/Kg	1000	1000	1.0
Method: Moisture					
Percent Moisture	5.0	%	1.0	1.0	1.0

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Job Number: 360-24417-1
 Sdg Number: OCRI-10

Client Sample ID: OC-SB-465-16/18-XXX
 Lab Sample ID: 360-24417-8

Date Sampled: 09/02/2009 0825
 Date Received: 09/02/2009 1710
 Client Matrix: Solid
 Percent Solids: 90

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0			Date Analyzed:	09/14/2009 1751	
Sulfate	ND	mg/Kg	44	44	1.0
Chloride	ND	mg/Kg	22	22	1.0
Method: L107-06-1B			Date Analyzed:	09/16/2009 1339	
Prep Method: Distill/Ammonia			Date Prepared:	09/15/2009 1130	
Ammonia	79 J	mg/Kg	7.0	7.0	1.0
Method: Lloyd Kahn			Date Analyzed:	09/08/2009 1317	
Total Organic Carbon	ND	mg/Kg	1000	1000	1.0
Method: Moisture			Date Analyzed:	09/03/2009 1451	
Percent Moisture	9.6	%	1.0	1.0	1.0

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Job Number: 360-24417-1
 Sdg Number: OCRI-10

Client Sample ID: OC-SB-465-8.0/10-DUP
 Lab Sample ID: 360-24417-9

Date Sampled: 09/02/2009 0745
 Date Received: 09/02/2009 1710
 Client Matrix: Solid
 Percent Solids: 89

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0					
Sulfate	ND	mg/Kg	45	45	1.0
Chloride	ND	mg/Kg	22	22	1.0
Method: L107-06-1B					
Prep Method: Distill/Ammonia					
Ammonia	78 J	mg/Kg	6.8	6.8	1.0
Method: Lloyd Kahn					
Total Organic Carbon	ND	mg/Kg	1000	1000	1.0
Method: Moisture					
Percent Moisture	11	%	1.0	1.0	1.0

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Job Number: 360-24417-1
 Sdg Number: OCRI-10

Client Sample ID: OC-SB-465-8.0/10-XXX
 Lab Sample ID: 360-24417-10

Date Sampled: 09/02/2009 0745
 Date Received: 09/02/2009 1710
 Client Matrix: Solid
 Percent Solids: 89

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0					
Sulfate	ND	mg/Kg	45	45	1.0
Chloride	ND	mg/Kg	23	23	1.0
Method: L107-06-1B					
Prep Method: Distill/Ammonia					
Ammonia	75 J	mg/Kg	7.2	7.2	1.0
Method: Lloyd Kahn					
Total Organic Carbon	ND	mg/Kg	1000	1000	1.0
Method: Moisture					
Percent Moisture	12	%	1.0	1.0	1.0

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Job Number: 360-24417-1
 Sdg Number: OCRI-10

Client Sample ID: OC-SB-468-0.0/1.0-XXX
 Lab Sample ID: 360-24417-11

Date Sampled: 09/02/2009 1005
 Date Received: 09/02/2009 1710
 Client Matrix: Solid
 Percent Solids: 87

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0				Date Analyzed: 09/14/2009 1936	
Sulfate	79	mg/Kg	45	45	1.0
Chloride	ND	mg/Kg	23	23	1.0
Method: L107-06-1B				Date Analyzed: 09/16/2009 1346	
Prep Method: Distill/Ammonia				Date Prepared: 09/15/2009 1130	
Ammonia	55 J	mg/Kg	6.8	6.8	1.0
Method: Moisture				Date Analyzed: 09/03/2009 1451	
Percent Moisture	13	%	1.0	1.0	1.0

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Job Number: 360-24417-1
 Sdg Number: OCRI-10

Client Sample ID: OC-SB-468-31/33-XXX
 Lab Sample ID: 360-24417-12

Date Sampled: 09/02/2009 1100
 Date Received: 09/02/2009 1710
 Client Matrix: Solid
 Percent Solids: 93

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0			Date Analyzed:	09/14/2009 1951	
Sulfate	390	mg/Kg	43	43	1.0
Chloride	ND	mg/Kg	21	21	1.0
Method: L107-06-1B			Date Analyzed:	09/16/2009 1347	
Prep Method: Distill/Ammonia			Date Prepared:	09/15/2009 1130	
Ammonia	88 J	mg/Kg	5.7	5.7	1.0
Method: Moisture			Date Analyzed:	09/03/2009 1451	
Percent Moisture	7.4	%	1.0	1.0	1.0

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Job Number: 360-24417-1
 Sdg Number: OCRI-10

Client Sample ID: OC-SB-468-8.0/10-XXX
 Lab Sample ID: 360-24417-13

Date Sampled: 09/02/2009 1010
 Date Received: 09/02/2009 1710
 Client Matrix: Solid
 Percent Solids: 87

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0				Date Analyzed: 09/14/2009 2006	
Sulfate	ND	mg/Kg	46	46	1.0
Chloride	ND	mg/Kg	23	23	1.0
Method: L107-06-1B				Date Analyzed: 09/16/2009 1348	
Prep Method: Distill/Ammonia				Date Prepared: 09/15/2009 1130	
Ammonia	92 J	mg/Kg	7.8	7.8	1.0
Method: Moisture				Date Analyzed: 09/03/2009 1451	
Percent Moisture	13	%	1.0	1.0	1.0

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Job Number: 360-24417-1
 Sdg Number: OCRI-10

Client Sample ID: OC-SB-471-0.0/1.0-XXX
 Lab Sample ID: 360-24417-14

Date Sampled: 09/02/2009 1315
 Date Received: 09/02/2009 1710
 Client Matrix: Solid
 Percent Solids: 92

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0				Date Analyzed: 09/14/2009 2022	
Sulfate	ND	mg/Kg	44	44	1.0
Chloride	ND	mg/Kg	22	22	1.0
Method: L107-06-1B				Date Analyzed: 09/16/2009 1348	
Prep Method: Distill/Ammonia				Date Prepared: 09/15/2009 1130	
Ammonia	ND J	mg/Kg	6.8	6.8	1.0
Method: Moisture				Date Analyzed: 09/03/2009 1451	
Percent Moisture	8.3	%	1.0	1.0	1.0

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Job Number: 360-24417-1
 Sdg Number: OCRI-10

Client Sample ID: OC-SB-471-3.0/5.0-XXX
 Lab Sample ID: 360-24417-15

Date Sampled: 09/02/2009 1330
 Date Received: 09/02/2009 1710
 Client Matrix: Solid
 Percent Solids: 81

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0					
Sulfate	ND	mg/Kg	48	48	1.0
Chloride	ND	mg/Kg	24	24	1.0
Method: L107-06-1B					
Prep Method: Distill/Ammonia					
Ammonia	ND J	mg/Kg	6.4	6.4	1.0
Method: Moisture					
Percent Moisture	19	%	1.0	1.0	1.0

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Job Number: 360-24417-1
 Sdg Number: OCRI-10

Client Sample ID: OC-SB-471-26/28-XXX
 Lab Sample ID: 360-24417-16

Date Sampled: 09/02/2009 1430
 Date Received: 09/02/2009 1710
 Client Matrix: Solid
 Percent Solids: 92

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0				Date Analyzed: 09/14/2009 2052	
Sulfate	63	mg/Kg	43	43	1.0
Chloride	ND	mg/Kg	21	21	1.0
Method: L107-06-1B				Date Analyzed: 09/16/2009 1350	
Prep Method: Distill/Ammonia				Date Prepared: 09/15/2009 1130	
Ammonia	100 J	mg/Kg	6.0	6.0	1.0
Method: Moisture				Date Analyzed: 09/03/2009 1453	
Percent Moisture	8.0	%	1.0	1.0	1.0

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Job Number: 360-24454-1
 Sdg Number: OCRI-12

Client Sample ID: OC-SB-461-28/30-XXX
 Lab Sample ID: 360-24454-2

Date Sampled: 09/03/2009 1650
 Date Received: 09/04/2009 1605
 Client Matrix: Solid
 Percent Solids: 94

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0					
Sulfate	200	mg/Kg	40	40	1.0
Chloride	ND	mg/Kg	20	20	1.0
Method: L107-06-1B					
Prep Method: Distill/Ammonia					
Ammonia	210	mg/Kg	6.8	6.8	1.0
Method: Moisture					
Percent Moisture	6.4	%	1.0	1.0	1.0

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Job Number: 360-24454-2
Sdg Number: OCRI-12A

Client Sample ID: OC-SB-470-31/33-XXX
Lab Sample ID: 360-24454-14

Date Sampled: 09/04/2009 1120
Date Received: 09/04/2009 1605
Client Matrix: Solid
Percent Solids: 89

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
Method: 7199			Date Analyzed: 10/29/2009 1710		
Prep Method: 3060A			Date Prepared: 10/28/2009 1212		
Chromium (hexavalent)	2.6 J H	mg/Kg	1.6	2.3	10

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6640

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Job Number: 360-24563-1
 Sdg Number: OCRI-14

Client Sample ID: OC-SB-456-0.0/1.0-XXX
 Lab Sample ID: 360-24563-11

Date Sampled: 09/11/2009 0830
 Date Received: 09/11/2009 1820
 Client Matrix: Solid
 Percent Solids: 98

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0				Date Analyzed: 09/21/2009 1920	
Sulfate	ND	mg/Kg	41	41	1.0
Chloride	38	mg/Kg	20	20	1.0
Method: L107-06-1B				Date Analyzed: 09/23/2009 0928	
Prep Method: Distill/Ammonia				Date Prepared: 09/22/2009 1347	
Ammonia	15 J	mg/Kg	6.7	6.7	1.0
Method: Moisture				Date Analyzed: 09/15/2009 1623	
Percent Moisture	2.5	%	1.0	1.0	1.0

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Job Number: 360-24563-1
 Sdg Number: OCRI-14

Client Sample ID: OC-SB-456-16/18-XXX
 Lab Sample ID: 360-24563-12

Date Sampled: 09/11/2009 1040
 Date Received: 09/11/2009 1820
 Client Matrix: Solid
 Percent Solids: 90

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0					
Sulfate	63	mg/Kg	43	43	1.0
Chloride	ND	mg/Kg	21	21	1.0
Method: L107-06-1B					
Prep Method: Distill/Ammonia					
Ammonia	390 J	mg/Kg	7.4	7.4	1.0
Method: Moisture					
Percent Moisture	9.7	%	1.0	1.0	1.0

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Job Number: 360-24563-1
 Sdg Number: OCRI-14

Client Sample ID: OC-SB-456-7.0/9.0-DUP
 Lab Sample ID: 360-24563-13

Date Sampled: 09/11/2009 0900
 Date Received: 09/11/2009 1820
 Client Matrix: Solid
 Percent Solids: 93

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0				Date Analyzed: 09/21/2009 2020	
Sulfate	ND	mg/Kg	43	43	1.0
Chloride	ND	mg/Kg	21	21	1.0
Method: L107-06-1B				Date Analyzed: 09/23/2009 0930	
Prep Method: Distill/Ammonia				Date Prepared: 09/22/2009 1347	
Ammonia	68 <i>J</i>	mg/Kg	7.5	7.5	1.0
Method: Moisture				Date Analyzed: 09/15/2009 1623	
Percent Moisture	7.4	%	1.0	1.0	1.0

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Job Number: 360-24563-1
 Sdg Number: OCRI-14

Client Sample ID: OC-SB-456-7.0/9.0-XXX
 Lab Sample ID: 360-24563-14

Date Sampled: 09/11/2009 0900
 Date Received: 09/11/2009 1820
 Client Matrix: Solid
 Percent Solids: 93

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0					
Sulfate	ND	mg/Kg	43	43	1.0
Chloride	ND	mg/Kg	22	22	1.0
Method: L107-06-1B					
Prep Method: Distill/Ammonia					
Ammonia	ND J	mg/Kg	6.7	6.7	1.0
Method: Moisture					
Percent Moisture	7.2	%	1.0	1.0	1.0

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Job Number: 360-24563-1
 Sdg Number: OCRI-14

Client Sample ID: OC-SB-457-0.0/1.0-XXX
 Lab Sample ID: 360-24563-15

Date Sampled: 09/11/2009 1310
 Date Received: 09/11/2009 1820
 Client Matrix: Solid
 Percent Solids: 95

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0 Chloride	ND	mg/Kg	21	21	1.0
Method: Soluble-300.0 Sulfate	5000	mg/Kg	420	420	10
Method: L107-06-1B Prep Method: Distill/Ammonia Ammonia	79 J	mg/Kg	6.3	6.3	1.0
Method: Moisture Percent Moisture	4.8	%	1.0	1.0	1.0

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Job Number: 360-24563-1
 Sdg Number: OCRI-14

Client Sample ID: OC-SB-457-8.0/10-XXX
 Lab Sample ID: 360-24563-16

Date Sampled: 09/11/2009 1320
 Date Received: 09/11/2009 1820
 Client Matrix: Solid
 Percent Solids: 91

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: Soluble-300.0 Chloride	ND	mg/Kg	22	22	1.0
Method: Soluble-300.0 Sulfate	37000	mg/Kg	2200	2200	50
Method: L107-06-1B Prep Method: Distill/Ammonia Ammonia	33 J	mg/Kg	7.2	7.2	1.0
Method: Moisture Percent Moisture	9.2	%	1.0	1.0	1.0